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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,004	11/17/2003	Jorg Lott	02P19522	9410

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DANVERS, MA 01923

EXAMINER

TRAN, THUY V

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/713,004

Applicant(s)

LOTT, JORG

Examiner

Thuy V. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 is/are allowed.
- 6) ☒ Claim(s) 1 and 11 is/are rejected.
- 7) ☒ Claim(s) 2-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/17/03; 5/4/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This is a response to the Applicant's filing on 11/17/2003. In virtue of this filing, claims 1-12 are currently presented in the instant application.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings submitted on 11/17/2003 are accepted.

Abstract Objection

3. The abstract of the disclosure is objected to because of the following informality:
"Figure 1" at the end should be deleted.
Correction is required. See MPEP § 608.01(b).

Claim Objections/ Minor Informalities

4. Claims 1-6 and 8-12 are objected to because of the following informalities:
(to improve antecedent basis, the following corrections are suggested)
Claim 1, line 2, "the" should be changed to --an--;
Claim 1, line 8, "the" should be changed to --a--;
Claim 1, line 10, "the" (first and second occurrences) should be changed to --a--;
Claim 1, line 12, "the" should be changed to --an--;
Claim 1, line 15, "the" should be changed to --a--;
Claim 2, line 3, "the" should be deleted;
Claim 2, line 4, "the" (first and second occurrences) should be changed to --an--;

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Claim 3, line 5, "the" should be changed to --an--;

Claim 3, line 6, "the" should be changed to --a--;

Claim 4, line 1, "the" should be changed to --a--;

Claim 4, line 3, "the" (first occurrence) should be changed to --a--;

Claim 5, line 1, "the" should be changed to --a--;

Claim 5, line 5, "the" should be changed to --a--;

Claim 6, line 5, "the" (first and second occurrences) should be changed to --an--;

Claim 8, line 3, "the" (first occurrence) should be changed to --a--;

Claim 9, line 3, "the" (second occurrence) should be changed to --a--;

Claim 9, line 4, "the" (first occurrence) should be changed to --a--;

Claim 9, line 7, "the" should be changed to --a--;

Claim 10, line 3, "the" should be changed to --a--;

Claim 10, line 4, "the" should be changed to --an--;

Claim 10, line 5, "the" should be changed to --a--;

Claim 10, line 9, "all of the" should be changed to --a--;

Claim 11, line 4, "the" should be changed to --a--;

Claim 11, line 5, "all of the" should be changed to --a--;

Claim 12, line 4, --said-- should be inserted after "for";

Claim 12, line 8, "the" should be changed to --an--;

Claim 12, line 10, "the" should be changed to --a--;

Claim 12, line 14, "the" should be changed to --an--;

Claim 12, line 15, "the" should be changed to --a--;

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Claim 12, line 23, --voltage-- should be inserted between “first” and “to”; and --said-- should be inserted between “to “ and “fourth”; and

Claim 12, line 25, “the” should be changed to --a--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Knobloch et al. (U.S. Patent No. 6,043,612).

With respect to claim 1, Knobloch et al. discloses, in Figs. 1-2, a low-pressure discharge lamp operating device and a corresponding operating method using an inverter [7, 8] (see Figs. 1-2), wherein an occurrence of rectifier [3] (see Figs. 1-2) effect in the low-pressure discharge lamp [2a, 2b] is monitored (via 34, 27, 32, 33, 11] (see Figs. 1-2) during the operation of the low-pressure discharge lamp [2a, 2b] in order to determine the end of its life, and wherein for a purpose of monitoring said rectifier effect of the low-pressure discharge lamp, a DC voltage drop (see Figs. 1-2 on signal line 29; col. 5, lines 19-21) across electric connections of the low-pressure discharge lamp, an electric power (which is from node at output of [3]; see Figs. 1-2) fed into said inverter [7, 8], or first variable which is proportional thereto (a voltage drop across a resistor [R1] connected to an output of the inverter [7, 8]; see Figs. 1-2), and second variable

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correlated with a running voltage (which is lamp current; see current path [35] in Figs. 1-2) of said low-pressure discharge lamp are evaluated.

With respect to claim 11, Knobloch et al. discloses, in Figs. 1-2, that the inverter [7, 8] is supplied with an approximately constant DC voltage (provided via [3]; see col. 3, lines 66-67), and said first variable is a voltage drop across a resistor [R1] (see Figs. 1-2) which, during a switching phase of the inverter [7, 8], has a current of the inverter [7, 8] flowing through it (see Figs. 1-2).

Allowable Subject Matter

7. Claim 12 would be allowed if corrected to overcome the objections set forth in this Office Action.

8. Claims 2-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or fairly suggest:

- A method for operating at least one low-pressure discharge lamp wherein said second variable correlated with the running voltage of said at least one low-pressure discharge lamp is an RMS value of an AC voltage component of the running voltage of said at least one low-pressure discharge lamp, in combination with the remaining claimed limitations as called for in claim 2;
- A method for operating at least one low-pressure discharge lamp wherein said second variable correlated with the running voltage of said at least one low-pressure

discharge lamp is constant value which corresponds to an average value of said running voltage which characteristic of a lamp type of said at least one low-pressure discharge lamp; in combination with the remaining claimed limitations as called for in claim 3;

- A method for operating at least one low-pressure discharge lamp wherein a product of the electric power fed into said inverter and a quotient of the DC voltage drop across the electric connections of said at least one low-pressure discharge lamp and the second variable correlated with the running voltage of the at least one low-pressure discharge lamp is compared with a predetermined value, in combination with the remaining claimed limitations as called for in claim 4 (claims 7-8 are also allowable since they are dependent on claim 4);
- A method for operating at least one low-pressure discharge lamp wherein a product of a predetermined power value and said second variable correlated with the running voltage of said at least one low-pressure discharge lamp is compared with a product of the electric power fed into said inverter and the DC voltage drop across the electric connections of the at least one low-pressure discharge lamp, in combination with the remaining claimed limitations as called for in claim 5;
- A method for operating at least one low-pressure discharge lamp wherein the electric power into said inverter, the DC voltage drop across the electric connections of said at least one low-pressure discharge lamp and an RMS value of an AC voltage component of the running voltage of said at least one low-pressure discharge lamp are determined from measured values which are fed to a microcontroller, and a program-

controlled evaluation is carried out by the microcontroller, in combination with the remaining claimed limitations as called for in claim 6;

- A method for operating at least one low-pressure discharge lamp wherein the values, which are determined at different points in time in the lamp operation, for a difference between a product of the electric power fed into said inverter and of the DC voltage drop across the electric connections of the at least one low-pressure discharge lamp and a product of a predetermined power value and of the second variable correlated with the running voltage of the at least one low-pressure discharge lamp are added up and evaluated, in combination with the remaining claimed limitations as called for in claim 9;
- A method for operating at least one low-pressure discharge lamp wherein the electric power fed into said inverter is determined from a voltage drop across a voltage divider which is arranged in parallel with an input of said inverter, and from a voltage drop across a resistor which is connected in series with an inverter transistor during a switching phase of said inverter and which at the same time has a current of said inverter flowing through it, in combination with the remaining claimed limitations as called for in claim 10; and
- An operating device for at least one low-pressure discharge lamp having a third measuring apparatus for measuring a third voltage which is proportional to the RMS value of a running voltage of said at least one low-pressure discharge lamp, and an evaluation unit which is connected to the outputs of said measuring apparatuses and comprises a program-controlled microcontroller and which serves to evaluate said

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first voltage to said fourth voltage as well as of controlling said half-bridge inverter function of a result of the evaluation, in combination with the remaining claimed limitations as called for in independent claim 12.

Citation of relevant prior art

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Knobloch et al. (U.S. Patent No. 6,011,358) discloses a ballast for low pressure discharge lamps.

Prior art Rudolph (U.S. Patent No. 5,583,399) discloses a ballast for low pressure discharge lamps.

Inquiry

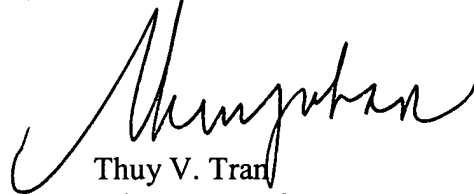
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', is positioned above the printed name and title.

Thuy V. Tran
Primary Examiner
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01/09/2005